National Aeronautics and
Space Administration

Headquarters
Washington, DC 20546-0001

Reply to Attn of: Q-1

Memorandum for the Record

Pursuant to the provisions of the Federal Advisory Committee Act (Public Law 92-463, October 6, 1972) and NASA Policy Directive 1150.21, entitled "Establishment, Operation and Duration of NASA Advisory Committees," the enclosed minutes of the Aerospace Safety Advisory Panel's open meeting conducted on August 22, 2001, at NASA Headquarters are submitted for the record.

David M. Lengyel
Executive Director
Aerospace Safety Advisory Panel

9/21/01
Date

Richard D. Blomberg
Chair
Aerospace Safety Advisory Panel

9/21/01
Date

Aerospace Safety Advisory Panel (ASAP)
Open Meeting
August 22, 2001
10:00 a.m. to 12:30 p.m.
NASA Headquarters (HQs)
Room 6H46

Introduction:
Mr. David Lengyel, Executive Director of the ASAP, opened the meeting with an announcement that this was an open federal advisory committee meeting. The Federal Register Notice announcing the meeting is provided as Enclosure 1.

Mr. Richard Blomberg asked each public attendee to introduce themselves and identify their affiliation. An attendance roster is provided as Enclosure 2. Mr. Blomberg discussed the agenda which was focused on Panel team leads presenting their assessments of the NASA response to the ASAP Calendar Year (CY) 2000 Annual Report, their current issues or activities, and required fact-finding to complete the year. He asked that team leads classify their assessments of NASA response as "open, closed, or continuing" in accordance with the definitions traditionally used by the panel and published in previous reports.

Mr. Blomberg then introduced the Aero-Space Technology Team Lead, Mr. Roger D. Schaufele.

Aero-Space Technology Team:
Mr. Schaufele stated that finding/recommendation #9 regarding Stratospheric Observatory for Infrared Astronomy (SOFIA) program operational issues is closed.

Mr. Schaufele stated that finding/recommendation #10 regarding Aviation Safety Officer (ASO) reporting process is open and that the team needed to study this issue further.

Mr. Schaufele listed issues of continuing interest to the Aero-Space Technology Team:

1. Review overall aviation safety practices at Code R (Aerospace Technology) centers;
2. Assessment of the X-43 and Lear Model 24 Mishap Investigation Board (MIB) report reviews.

Mr. Lengyel took actions to set up fact-finding visits to the Langley Research Center, the Ames Research Center (ARC), and a telecon with the Glenn Research Center flight operations personnel. He also stated that he would

obtain the Lear Model 24 and X-43 MIB reports when available and ensure proper distribution.

Astronaut Training Team:
Mr. Sid Gutierrez stated that the issue of interest to the Astronaut Training Team in the coming year is:

1. Debrief Expedition 2 (and following ISS crews) crew regarding crew training issues.

Computer Hardware/Software Team:
Ms. Shirley McCarty stated that finding/recommendation #14 regarding NASA utilization of Independent Verification and Validation (IV&V) is considered open.

Ms. McCarty stated that finding/recommendation #15 regarding NASA's IV&V research program is considered open. The team needs to conduct additional fact-finding on this topic.

Ms. McCarty stated that finding/recommendation #16 regarding NASA's Information Technology (IT) security plans is close to being closed.

Ms. McCarty stated that finding/recommendation #17 regarding NASA's use of the Computer Maturity Model (CMM) processes was well planned and therefore closed.

Ms. McCarty listed the issues of interest to the Computer Hardware/Software Team in the coming year:

1. International Space Station (ISS) Command & Data Handling (C&DH) system architecture study participation (led by ARC);
2. Shuttle Cockpit Avionics Upgrade (CAU) and potential Multi-Function Electronic Display System (MEDS) installation delays for Orbiters OV-103 and OV-105;
3. Status of IV&V activity at the Goddard Space Flight Center (GSFC) and at the Fairmont IV&V Facility;
4. Multi-Element Integration Testing (MEIT) for off nominal and stress conditions;
5. MEIT regression testing scheduling issue. Personnel must request MEIT regression testing be put back into the schedule on a case-by-case basis versus having sufficient schedule to employ this testing regularly;
6. Information Technology (IT) security. Metrics on the completion of the subject IT plans;
7. Crew/Controller simulation fidelity;

8. Long-term availability of General Purpose Computer (GPC) components for Shuttle;
9. Space Shuttle Main Engine (SSME) Advanced Health Monitoring System (AHMS) project status. Need AHMS project schedule in order to attend project reviews. Computer and Propulsion Teams should review software requirements and development strategy;
10. ISS Portable Computer System (PCS) displays and display development;
11. Examine the way mass storage devices (MSDs) removed and replaced on orbit given the inventory management difficulties;
12. Advanced Air Traffic Control (ATC) Technology project (NASA and Federal Aviation Administration) should be reviewed for safety. Consideration should be given to looking at ATC simulator. This is a CY '02 issue and not a high priority for this year;
13. Continue to monitor research on expert systems and neural networks in the CY '02 timeframe;
14. Command Launch Control System (CLCS) – vitally important and safety-critical. With CLCS being delayed so long, the Panel must review the current Launch Control System's ability to function safely until the initial operational capability of the CLCS;
15. X-38/Crew Return Vehicle (CRV) software and any software being developed for NASA "X vehicles";
16. Work with Workforce Team to be sure we are keeping up with IT issues and Electrical Engineering (EE) as well as IT professional shortages.

Mr. Blomberg assigned Ms. McCarty the action of coming up with a priority list of topics—by Center. Ms. McCarty stated that for now, the redundancy issue is #1 on the priority list.

<u>CRV Team:</u>
Mr. Roger Schaufele stated that finding/recommendation #7 regarding the X-38 (V201) test plan review should be closed.

Mr. Schaufele stated that finding/recommendation #8 regarding transfer of NASA's design knowledge related to safety issues was assessed to be proceeding forward positively and therefore should be closed.

Mr. Blomberg stated that the ASAP has taken the stance since 1992 that CRV is vital. Furthermore, the Panel bought into the notion of one full-crew CRV and a Soyuz design reference mission. NASA is now being put in the position of possibly no CRV and full reliance on the Russian Soyuz vehicle for crew return/rescue. The benefit of the CRV is obviously that an injured crewmember could return with a softer landing in the CRV and there would be no need to abandon the ISS for a medical emergency. The remaining three crew could return on the Soyuz if needed.

Mr. Schaufele stated that the issues to be followed by the CRV Team were:

1. Status of where the CRV is in the ISS program (i.e. funded or not funded);
2. Status of Shuttle Long-Duration Orbiter studies.

Extravehicular Activity (EVA) Team/Radiation Team

Mr. Gutierrez and Dr. Harris stated that finding/recommendation #19 regarding neutron dosimeters had not been assessed by the EVA Team and therefore should remain continuing.

Mr. Gutierrez stated that finding/recommendation #20 regarding initiating a new Extravehicular Mobility Unit (EMU) program should remain open. Mr. Gutierrez stated that from yesterday's International Space Station (ISS) meeting only 15 percent of EVA's has been completed. 85 percent remains to be completed. He also stated that some logistics issues will be solved by new suits. Mr. Blomberg stated that the NASA response is a status of assets and that some responses missed the Panel's point. He stated that where a new EMU fits into the overall NASA budget is unknown.

Mr. Gutierrez listed the issues of interest to the EVA Team in the coming year:

1. EMU suit logistics supportability;
2. New EMU suit;
3. Radiation dosimetry.

ISS Team:

Dr. Gleghorn stated that finding/recommendation #6 regarding accelerating PCS software releases for MEIT is debatable whether it is closed or continuing. He recommended that we discuss this subject at the next Plenary to be held at the Johnson Space Center (JSC) in October.

Dr. Gleghorn stated that the micrometeoroid debris shielding issue was put to rest in May 2001. Dr. Gleghorn believed that NASA is doing as much as possible as quickly as possible. He also stated that he spent some time speaking to the personnel at the Aerospace Corporation regarding orbital debris coordination between the U.S. Air Force (USAF) and NASA and this situation is proceeding very well. The USAF is not tracking and cataloging debris down to 5 cm, however, they are detecting them. He stated that it is very difficult to track at 5 cm. Orbits of this size debris are hard to detect and few in number.

Mr. Blomberg stated that without shielding, caution and warning becomes critical. Dr. Gleghorn stated that NASA needs an integrated approach for damage detection, assessment, control and repair. JSC has tasked the ISS Chief Engineer to brief this to the Panel on 18 Oct.

Dr. Gleghorn stated that in addition to the above, issues of interest to the ISS Team in the coming year are:

1. Commanding procedure issues;
2. Coordination between the flight control team and the mission evaluation room.

Kennedy Space Center (KSC) and Work Documentation Team:
Mr. Blomberg stated that finding/recommendation #4 dealing with work paper at KSC is continuing.

Mr. Blomberg stated that finding/recommendation #5 regarding Shuttle infrastructure is open. He stated that this is a super critical area. The issue includes all support including test equipment, brick and mortar, cables, test stands, etc. He stated that the situation has gotten beyond the capability of the agency, financially and technically, to handle.

Mr. Blomberg listed issues of continuing interest to the KSC & Work Documentation Teams:

1. Shuttle infrastructure long-term supportability/safety issues;
2. Workforce acceptance of the new work paper;
3. Orbiter Major Modification (OMM) versus Structural Inspection (SI) issue as it relates to workforce and quality of the work paper for this modified task;
4. KSC workforce morale and quality of work issues;
5. Boeing's move of sustaining engineering personnel from Huntington Beach, CA, to KSC and JSC;
6. Status of digitizing Shuttle drawings.

Logistics Team:
Mr. Sieck stated that the Logistics Team had no findings/recommendation in the ASAP CY 2000 Annual Report. He stated that flight support had done well with current flight rate.

Mr. Sieck stated that the items of interest to the Logistics Team in the coming year would be:

1. Quantity and quality of spare parts for both the Shuttle and ISS;
2. Hardware obsolescence, number of substitutions, changes in vendors, vendor stability, quality of products produced, tooling, test equipment, skills issue, and retention;
3. Logistics for both the Shuttle and ISS;

4. Supportability issues related to Flight Support Equipment (FSE), Ground Support Equipment (GSE), Special tooling and Test Equipment;
5. Workforce skills issues related to vendor work being transferred to KSC;
6. Logistics management center of gravity (need a briefing from KSC/Shannon Bartel);
7. Continued involvement with the Integrated Logistics Panel meeting;
8. Pursue obtaining a Boeing report on logistics and supportability.

Propulsion and Power (P&P) Team:
Mr. Englar (on behalf of Mr. Goetz) stated that the P&P Team had no specific findings/recommendations in the ASAP CY 2000 Annual Report other than the Shuttle planning horizon. The Shuttle upgrades projects Electric Auxiliary Power Unit (EAPU), AHMS and Solid Rocket Booster (SRB) Thrust Vector Control (TVC) appear to be limited by budget problems.

Mr. Goetz stated that the items of interest to the P&P Team in the coming year would be:

1. Shuttle propulsion upgrades status (EAPU, AHMS, and SRB TVC);
2. Joint evaluation of AHMS Phase 2 software requirements with Computer Team;
3. Long-term supportability of the current Shuttle hydrazine APUs to include revisiting the certification process;
4. Friction stir welding status at Michoud;
5. Space Launch Initiative propulsion topics (including MSFC S&MA assessment);
6. SSME nozzle long-term support plan;
7. Block II engine first flight anomaly.

Space Shuttle Team:
Mr. Englar stated that finding/recommendation #1 dealt with the Shuttle planning horizon and should be held open due to factors such as the cancellation and delay of Shuttle upgrades.

Mr. Englar stated that finding/recommendation #2 dealt with the Shuttle crew escape system should be classified as continuing. Three schemes are being evaluated by Boeing. Ron Dittemore has proposed a fourth scheme. All would be a major impact on structure, configuration of Shuttle, and budget.
Mr. Gutierrez stated that this would have to be a separate line item in the NASA budget authorized by Congress in order to get funded. And it's the closest way for NASA to get to what it espouses—safety first.

Mr. Englar stated that finding/recommendation #3 dealt with the Shuttle hydraulic systems redundancy and could be closed because NASA not only agrees with

the assessment but has also conducted studies of the hydraulic line separation requirements.

Mr. Englar stated that the items of interest to the Shuttle Team in the coming year would be:

1. Portfolio of Shuttle upgrades status and schedule;
2. Shuttle wiring. Some bundles contain redundancy;
3. Continued involvement with the process control working group;
4. Continued involvement in the Shuttle Program Manager's Review (PMR);
5. Status of Global Positioning System (GPS) in the Orbiter;
6. Shuttle Program privatization effort impacts to safety.

Workforce Team:
ADM Reason stated finding/recommendation #11 regarding the incentives required for retention of critical skills should be closed because NASA has put appropriate safeguards in place. He stated that incentives are in place at Office of Space Flight (OSF) centers to help retain these people such as active recruitment, bonuses, relocation benefits, and so on.

ADM Reason stated finding/recommendation #12 regarding how to deal with new hires, training, and knowledge-based technical experience should be classified as continuing. He stated that NASA has responded by putting new plans and programs in place to take care of this. ASAP's job in future will be to conduct follow-up assessments.

ADM Reason stated finding/recommendation #13 regarding NASA's long term workforce plan should be classified as continuing.

ADM Reason stated that the items of interest to the Workforce Team in the coming year would be:

1. Boeing relocation of Shuttle and ISS sustaining engineering workforce;
2. Meeting with Human Resources at the HQ level. How are Centers to assure attainment of Agency long-range workforce requirements;
3. USA workforce (including management) given that privatization will require more contractor involvement;
4. Knowledge capture/retention program to minimize loss of expertise from retiring employees.

2 Enclosures:
1. Federal Register Notice
2. Attendance Roster

participants. Visitors will be requested to sign a visitor's register.

Beth M. McCormick,

Advisory Committee Management Officer, National Aeronautics and Space Administration.

[FR Doc. 01–20223 Filed 8–10–01; 8:45 am]

BILLING CODE 7510–01–P

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

[Notice (01–094)]

Aerospace Safety Advisory Panel (ASAP); Meeting

AGENCY: National Aeronautics and Space Administration.

ACTION: Notice of Meeting.

SUMMARY: In accordance with the Federal Advisory Committee Act, Pub. L. 92–463, as amended, the National Aeronautics and Space Administration announces a forthcoming meeting of the Aerospace Safety Advisory Panel.

DATES: Wednesday, August 22, 2001, 9:30 a.m.—12:15 Eastern Daylight Time.

ADDRESSES: National Aeronautics and Space Administration Headquarters, 300 E Street, SW, Room 6H46, Washington, DC 20546.

FOR FURTHER INFORMATION CONTACT: Mr. David M. Lengyel, Aerospace Safety Advisory Panel Executive Director, Code Q–1, National Aeronautics and Space Administration, Washington, DC 20546, 202/358–0391.

SUPPLEMENTARY INFORMATION: This meeting will be open to the public up to the seating capacity of the room. The agenda for the meeting is as follows:

To discuss the NASA response to the Aerospace Safety Advisory Panel Calendar Year 2000 Annual Report, current issues, and remaining fact-finding for Calendar Year 2001.

It is imperative that the meeting be held on this date to accommodate the scheduling priorities of the key participants. Visitors will be requested to sign a visitors register.

Beth M. McCormick,

Advisory Committee Management Officer, National Aeronautics and Space Administration.

[FR Doc. 01–20224 Filed 8–10–01; 8:45 am]

BILLING CODE 7510–01–P

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

[Notice 01–095]

Notice of Prospective Patent License

AGENCY: National Aeronautics and Space Administration.

ACTION: Notice of prospective patent license.

SUMMARY: NASA hereby gives notice that Ovidium, Inc., a Delaware corporation, has applied for a partially exclusive license to practice the inventions described and claimed in U.S. Patent No. 5,416,618, entitled "Full Complex Modulation Using Two One-Parameter Spatial Light Modulators," U.S. Patent No. 5,768,242, entitled "Apparatus and Method For Focusing A Light Beam in A Three-Dimensional Recording Medium By A Dynamic Holographic Device," U.S. Patent No. 5,859,728, entitled "Method and Apparatus for Improved Spatial Light Modulation," U.S. Patent No. 6,055,086 entitled "Method and Apparatus for Improved Spatial Light Modulation," and NASA Case No. MSC–23320–1, entitled "Spatial Light Modulators for Full Cross-Connections in Optical Networks," which are assigned to the United States of America as represented by the Administrator of the National Aeronautics and Space Administration. Written objections to the prospective grant of a license should be sent to Johnson Space Center.

DATES: Responses to this notice must be received by September 12, 2001.

FOR FURTHER INFORMATION CONTACT: James Cate, Patent Attorney, NASA Johnson Space Center, Mail Stop HA, Houston, TX 77058–8452; telephone (281) 483–1001.

Dated: August 1, 2001.

Edward A. Frankle,

General Counsel.

[FR Doc. 01–20225 Filed 8–10–01; 8:45 am]

BILLING CODE 7510–01–P

NATIONAL SCIENCE FOUNDATION

Advisory Committee for Geosciences; Committee of Visitors; Notice of Meeting

In accordance with the Federal Advisory Committee Act (Pub. L. 92–463, as amended), the National Science Foundation announces the following meeting:

Name: Advisory Committee for Geosciences; Committee of Visitors for the Instrumentation and Facilities Program in the Division of Earth Sciences (1755).

Date/Time: September 12–14, 2001; 8:30 am–5:00 pm each day.

Place: Room 380, NSF, 4201 Wilson Boulevard, Arlington, VA.

Type of Meeting: Part-Open.

Contact Person: Dr. David Lambert, Program Director, Instrumentation and Facilities Program, Division of Earth Sciences, National Science Foundation, 4201 Wilson Boulevard, Arlington, VA 22230. Telephone: (703) 292–8558.

Purpose of Meeting: To carry out Committee of Visitors (COV) review, including program evaluation, GPRA assessments, and access to privileged materials.

Agenda

Closed: September 12 from 11:00–5:00—To review the merit review processes covering funding decisions made during the immediately preceding three fiscal years of the Instrumentation and Facilities Program

Open: September 12 from 8:30–11:00—Introductions, charge and general discussion of selection process. September 13 from 8:30–5:00 and September 14 from 8:30–5:00—To assess the results of NSF program investments in the Instrumentation and Facilities Program. This shall involve a discussion and review of results focused on NSF and grantee outputs and related outcomes achieved or realized during the preceding three fiscal years. These results may be based on NSF grants or other investments made in earlier years.

Reason for closing: During the closed session, the Committee will be reviewing proposal actions that will include privileged intellectual property and personal information that could harm individuals if they are disclosed. If discussions were open to the public, these matters that are exempt under 5 U.S.C. 552b(c)(4) and (6) of the Government in the Sunshine Act would be improperly disclosed.

Dated: August 8, 2001.

Susanne Bolton,

Committee Management Officer.

[FR Doc. 01–20268 Filed 8–10–01; 8:45 am]

BILLING CODE 7555–01–M

NATIONAL SCIENCE FOUNDATION

Proposal Review; Notice of Meetings

In accordance with the Federal Advisory Committee Act (Pub. L. 92–463, as amended), the National Science Foundation (NSF) announces its intent to hold proposal review meetings throughout the year. The purpose of these meetings is to provide advice and recommendations concerning proposals submitted to the NSF for financial support. The agenda for each of these meetings is to review and evaluate proposals as part of the selection process for awards. The majority of these meetings will take place at NSF, 4201 Wilson, Blvd., Arlington, Virginia 22230.

AEROSPACE SAFETY ADVISORY PANEL

8/22/01

NASA HEADQUARTERS

Name	Organization	Phone Number
① Aaron Manka	NSF / NASA	202/358-1267
② Karl Allen	Code W	x-2595
③ Frank Sietzen	UPI	202 543 1504
④ Frederic Nordlund	ESA	202 488 4158
⑤ Scott Burnell	UPI	202 898-8148
⑥ Fred Gregory	NASA / Code Q	x 2406
⑦ Bill Hill	NASA / Code QE	x 0571
⑧		
⑨		
⑩		
⑪		
⑫		

Enclosure 2